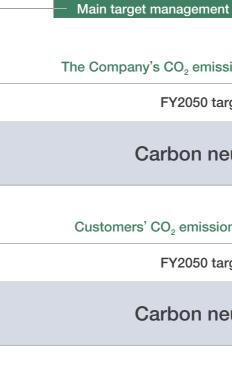
At Mitsuuroko Group, we are developing a variety of businesses to realize a low-carbon society. By expanding our mainstay Energy Solutions Business and the Power & Electricity Business, which could become our next pillar, we will contribute to the realization of a low-carbon society. We believe that this is the role we can play as a corporate citizen. Mitsuuroko Group will continue to help each and every customer lead more fulfilling lifestyles while maintaining close stewardship of natural resources and the environment, for the sake of the children who will lead the next generation and the Earth.

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\* Carbon neutral: Virtually zero emissions, calculated by subtracting the amount absorbed by plants, etc. from CO<sub>2</sub> emissions



19



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20 SUSTAINABILITY REPORT 2022

Environmental management/Environmental risk management

Environment

## **Environmental management**

#### Basic approach

As a corporate group that is responsible for the supply of energy, Mitsuuroko Group works to appropriately identify the impact that its business activities have on climate change and natural capital. Furthermore, along with "environmental preservation" as set forth in the Charter of Corporate Ethics, the Group is engaging in initiatives together to realize a sustainable society.

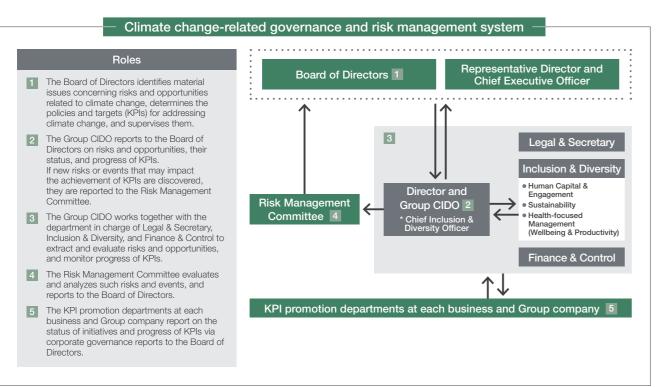
Charter of Corporate Ethics (extract)

Contribute to the preservation of the global environment and the creation of a prosperous and livable society

Mitsuuroko Group will be aware that it receives various benefits from the Earth, including the resources necessary for its business activities, and that it is the Group's responsibility to preserve the global environment in a better state.

#### Environmental management promotion system

The Company recognizes climate change as important management issues for the preservation of the global environment, and the Board of Directors determines policies for addressing climate change and oversees their status. Specifically, the Director and Group CIDO reports periodically (at least once a year) to the Board of Directors on the Group's risks and opportunities related to climate change as well as their status. Based on these reports, the Board of Directors determines policies and targets (KPIs) for addressing climate change. Additionally, during the Board of Directors' regular monthly meetings, the Director and Group CIDO provide updates on the progress of initiatives aimed at addressing climate change policies and meeting Key Performance Indicators (KPIs). These updates are included as a vital component of the corporate governance report, and the Board of Directors oversees them accordingly.



## **Environmental risk management**

#### Response to climate change and natural disasters

#### Climate change initiatives

The Group is developing a variety of businesses to realize a low-carbon society. LPG is a form of distributed energy that is environmentally friendly and is portable. We are also promoting the spread of energy products, such as solar power generation systems, lithium-ion batteries, and residential-use fuel cells,

#### Response to natural disasters

While LPG is a form of distributed energy that is easy to install and restore even when natural disasters linked to climate change occur, such as torrential downpours and storm surges, it is possible for filling stations to be damaged and for its transportation to be delayed or slowed. In preparation for emergencies, we have implemented disaster prevention measures at facilities such as filling stations and have also formulated a business continuity plan (BCP). The LPG supply network is rationally designed to ensure a steady supply of LPG to every corner of the country in times of peace and even in times of disaster. In addition, while we continue to upgrade our

#### Water risk initiatives

#### **Basic approach**

We consider water risk to be an important management issue and are taking actions such as water stress/risk studies, and water hazards and water management.

# Implementation of water stress/risk studies

Using the WRI Aqueduct, an international indicator, we comprehensively analyzed and evaluated current and future risks (water demand, water source security, water damage, etc.). As a result, we confirmed that there is no significant water stress or risk in the Group's main facilities as of now.

## Water consumption, water discharge volume, and water quality control

In order to use water resources sustainably, we monitor water consumption and strive to save water, and also implement appropriate wastewater management. In FY2021, there were no violations of standards and regulations pertaining to water discharge.

#### Situation of water resources utilization

In FY2021, Group-wide use of domestic freshwater resources (water supply and wells) totaled 6,454 thousand m<sup>3</sup>, and the amount discharged to underground and rivers (excluding sewage) was 647 thousand m<sup>3</sup>.



that are helpful for people's lifestyles today and for the global environment of the next generation. Furthermore, through the creation of renewable energy, we are working to contribute to the improvement of the global environment through reducing  $CO_2$  emissions and improve energy self-sufficiency.

operations and make them efficient at Mitsuuroko Administration Center (Saitama-shi, Saitama), a shared services division that consolidates the operations of the Group companies, which the Nagano Office of Mitsuuroko Administration Center opened in order to avoid the risk of interruption in our operations when struck by disaster, etc. due to centralization, and to establish a system to ensure the continuation of operations in the event of an emergency. We have established a system that allows us to shift to predetermined operations in an emergency by activating the BCP program if it becomes impossible to carry out operations in Saitama-shi.

#### Initiatives to reduce water usage

# 1 Preserving water resources through the use of business cards made primarily from limestone

From the viewpoint of conserving forests and water resources, the Group has adopted the use of business cards made with "LIMEX," a material derived primarily from limestone. Limestone exists in abundance throughout the world and is a mineral resource which Japan is completely self-sufficient in and can obtain at a low cost. By adopting limestone as the main material for our business cards, we are contributing to the preservation of forests and water resources, which are essential for the production of paper. This initiative saves 10 liters of water per card box of business cards (100 cards). When converted to the number of business cards used by the Group, this equates to 23,230 liters of water preserved in a year.

#### 2 Water-saving initiatives

In the wellness business, we are working to reduce bathing water used at "Yokohama Tennen Onsen SPA EAS" through the use of a recovery tank (water supply and natural spring water) timer control and watersaving devices installed in all shower heads. We are also reducing other water used at the facility through measures such as the introduction of water-saving toilets, and employees are also making efforts to save water.

We are also promoting the introduction of water-saving showers and toilets in rental apartments owned by our real estate business.

## **Environmental risk management**

#### Management of chemicals and contaminants

Since our operations have little relevance to emissions of air pollutants such as VOCs, NOx, and SOx, we do not perform measurements for these. Waste, including hazardous waste, is properly disposed of through specialized waste disposal companies in accordance with laws, regulations, and other rules. In FY2021, there

were no penalties or fines related to environmental laws and regulations (Air Pollution Control Act, Water Pollution Prevention Act, Soil Contamination Countermeasures Act, Waste Management and Public Cleansing Act, etc.) due to outflows or excess emissions of environmental pollutants.

#### Response to soil contamination

In the event that pollution is detected at LPG filling stations and gasoline service stations, while we report such incidents to the relevant government agencies and actively disclosing information to the public, such as through explanations to residents within the vicinity or

press releases, we work to control soil contamination. In accordance with the state of the pollution, we employ measures such as excavation, removal, and paving to prevent contamination from spreading or entering ground water.



## **Climate change initiatives**

#### Basic approach

In terms of climate change initiatives, as an entity responsible for stable supply in regions, Mitsuuroko Group aims to harness its comprehensive power embedded in these regions to maintain and improve supply infrastructure to ensure supply is also available during emergencies, while implementing various initiatives that align with the diversification of customer needs and desire for choices. All of Mitsuuroko Group is engaging in climate change initiatives to achieve a sustainable society through reducing CO<sub>2</sub> emissions, promoting renewable energy, and reducing fuel consumption. For customers who are focused on reducing CO<sub>2</sub>, we offer environmentally friendly electricity plans that stipulate the use of renewable energy. In addition, we utilize monitoring information of remote automatic meter readings, and provide a delivery operation streamlining solution that proposes the optimal delivery plans.

## TCFD

#### Mitsuuroko Group's climate change initiatives

Mitsuuroko Group considers the TCFD recommendations an effective framework for disclosing information and engaging in dialogue with stakeholders in regard to climate change issues. We announce our endorsement of the TCFD recommendations, and in accordance with the recommendations, we disclose information on the impact of climate change on the Group's business activities and the measures we are taking in response. The Company also participates in the TCFD Consortium\*, which discusses initiatives for information disclosure on climate change response in accordance with the TCFD recommendations.

#### Governance and risk management

The Company recognizes climate change as an important management issue, and the Board of Directors determines policies for addressing climate change and oversees their status.

Specifically, the Director and Group CIDO works together with Inclusion & Diversity, Finance & Control, and Legal & Secretary to analyze materiality, extract and evaluate climate change-related risks and opportunities, and identify material issues concerning such risks. In addition, the Director and Group CIDO reports periodically (at least once a year) to the Board of Directors on the Group's risks and opportunities related to climate change as well as their status. Based on these reports, the Board of Directors determines policies and targets (KPIs) for addressing climate change.

For KPIs determined, each department in charge of KPI promotion reports on the progress in a corporate governance report that is submitted monthly to Finance & Control, and Inclusion & Diversity and Finance &







\* The TCFD consortium:

A consortium established in May 2019 and led by the private sector to discuss effective disclosure of information by companies in response to climate change and measures to link the disclosed information to appropriate investment decisions by financial institutions and other parties. The Ministry of Economy, Trade and Industry, the Financial Services Agency, and the Ministry of the Environment participate as observers

Control monitor the progress.

At regular monthly meetings of the Board of Directors, the Director and Group CIDO reports on the status of initiatives based on the policies and targets (KPIs) progress as one of the items in a corporate governance report, and the Board of Directors supervises accordingly.

If new risks or events that may impact the achievement of KPIs are discovered, each department reports on them to the Director and Group CIDO. The Director and Group CIDO then reports to the Risk Management Committee, which is chaired by the Representative Director.

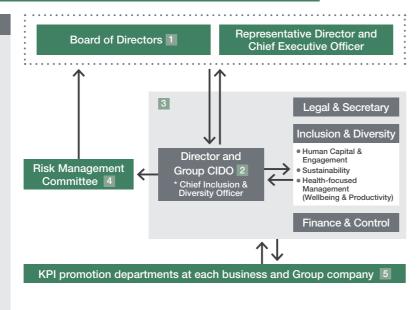
The Risk Management Committee evaluates and analyzes such risks and events, reporting them to the Board of Directors. Based on these reports, the Board of Directors identifies new material issues, then determines policies and targets (KPIs), and supervises them accordingly.

## **Climate change initiatives**

#### Climate change-related governance and risk management system

#### Roles 1 The Board of Directors identifies material issues concerning risks and opportunities related to climate change, determines the policies and targets (KPIs) for addressing

- climate change, and supervises them 2 The Group CIDO reports to the Board of Directors on risks and opportunities, their status, and progress of KPIs. If new risks or events that may impact the achievement of KPIs are discovered they are reported to the Risk Management Committee
- 3 The Group CIDO works together with Legal & Secretary, Inclusion & Diversity, and Finance & Control to extract and evaluate risks and opportunities, and monitor progress of KPIs.
- 4 The Risk Management Committee evaluates and analyzes such risks and events, and reports to the Board of Directors.
- 5 The KPI promotion departments at each business and Group company report on the status of initiatives and progress of KPIs via corporate governance reports to the Board of Directors.



#### Strategy

The Group assumes climate change to have a significant impact on its Energy Solutions Business and Power & Electricity Business. For these businesses, we have begun analyzing the below 2°C scenario, which is associated with high transition risks, and the 4°C scenario, which is associated with high physical risks. With 2050 as the target year, we are examining the risks and opportunities that may arise under these scenarios as well as response measures.

The below 2°C scenario assumes that the climate will

#### Indicators and targets

The Group's GHG emissions in FY2021 were approximately 5.99 million t-CO<sub>2</sub>eq. 99.4% of the emissions were Scope 3, of which 48.8% was attributed to customer gas, electricity, and product usage and 40.3% not change significantly compared to its current state due to the tightening of environmental restrictions. The 4°C scenario assumes that decarbonization and carbon reduction efforts fail to advance, leading to an increase in physical risks such as those due to natural disasters. Going forward, we will evaluate the impacts under each scenario and also carry out scenario analysis for other businesses, taking the results into account in the formulation of our management plans.

was attributed to related procurement operations. The Group's Scope 1 and Scope 2 emissions were attributed to vehicle operation (gas delivery vehicles and company cars) and gas and electricity usage within the Company.

		Breakdown by Scope		
		Greenhouse gas (GHG) emissions	Percentage	CO <sub>2</sub> emissions reductior target
Scope 1	Gas delivery vehicles and company cars	★ 17,049 t-CO <sub>2</sub>	0.3%	
Scope 2	The Company's electricity usage	★ 16,972 t-CO <sub>2</sub>	0.3%	Carbon neutrality by 2050
Scope 3	Energy procurement and customer usage	★ 5,958,716 t-CO₂eq	99.4%	

★ marked indicators are independently assured by KPMG AZSA Sustainability Co., Ltd. For Scope 3 emissions, the Company's category 1 (★596,251 t-CO2eq), category 3 (\*2,415,898 t-CO2eq), category 4 (\*19,676 t-CO2eq), and category 11 (\*2,926,890 t-CO2) emissions have each been assured as well as the total of these four categories. (See pages 27-28 for information on the calculation standard)

To reduce the Company's direct CO<sub>2</sub> emissions (Scope 1 and Scope 2), the Group is automating remotely obtained data meter readings for LPG and working to streamline delivery operations (reduction of truck operating time and travel distance), eliminate complicated deliveries, and promote eco-driving activities. We are also changing to electric vehicles (EVs) for company cars and increasing the amount of renewable energy and

environmentally friendly energy sources we handle. In addition, to contribute to the reduction of CO<sub>2</sub> emissions in our supply chain (Scope 3), we are expanding our meter readings service and delivery operation streamlining services powered by SmartOWL®, transitioning to high-efficiency equipment (ECO FEEL, fuel conversion systems, ECO-JOZU, ECO ONE), and promoting the Mitsuuroko Green Plan.

#### FY2021 initiatives to reduce CO<sub>2</sub> emissions

In the Energy Solutions Business, we have promoted the expansion of our meter readings service and delivery	
operation streamlining service powered by SmartOWL®,	
and transitioning to high-efficiency equipment for	
our existing customers. We are also improving fuel	
efficiency during deliveries by eliminating complicated	
deliveries, and shortening travel distances and reducing	
fuel consumption through eco-driving activities.	
In the Power & Electricity Business, we are expanding	
the provision of the Mitsuuroko Green Plan	
In the Foods Business, we are promoting the sale of	
label-less PET bottles and the elimination of plastic (use	
of paper straws and wooden muddlers).	
In the Living & Wellness Business, we worked to expand	
renewable energy electricity contracts in common areas	

ren of owned properties and switched to energy-saving

#### Climate-related risks and opportunities, and their response measures

Scenario	Category	Classifications of factors	Opportunity/ Risk	Risks and opportunities
		Administrative policies and laws	Risk	Tightening of fossil fuel regulation operating cost increases due to c taxes (Estimated cost increase: a ¥900 million/year*1)
				Carbon tax (for developed countries including Japan) is projected to rise US\$120/t-CO <sub>2</sub> by 2030 and US\$20 by 2050* <sup>2</sup>
		Market and technology	Opportunities	Increase sales in the Power & Electricit due to increased demand for renewable
				(Renewable energy is expected to c 58% of Japan's energy mix by 2050
			Risk	Decrease in sales for LPG and pe products
Below 2°C	Transition risk			(Petroleum demand in Japan is expe fall by 78% by 2050 compared to 2
			Opportunities	Reduction of future in-house pow generation costs if the Company establishes plants that take adva of developments in renewable en production technologies
				Solar power generation costs are ex to drop by 50% by 2050 compared 2021*2
			Risk	Increase in costs to meet the risir expectations of investors and the in respect to corporate climate cl initiatives (Financing costs and communication
4°C	Physical risk	Acute	Risk	Decrease in sales and increase in recovery costs due to damage to and facilities, the supply chain, ar companies as a result of heavy ra floods
	Below 2°C	Below Transition 2°C Transition	Below     Transition       2°C     Transition       Market and technology	Scenario     Category     of factors     Transition       Below     Transition     Administrative policies and laws     Risk       2°C     Transition     Market and technology     Opportunities       Market and technology     Risk     Risk       8     Market and technology     Risk

\*1 The cost increase for business operations due to the impact of carbon tax is calculated as below: 2050 Carbon tax of US\$200/t-CO<sub>2</sub> is based on the International Energy Agency's publication, "World Energy Outlook 2022": Group's CO<sub>2</sub> emissions (t) in 2021 × US $200/t-CO_2$  × exchange rate (¥/\$)

\*2 Each estimation is based on the calculations in "World Energy Outlook 2022." \*3 PPA model: A business model in which business operators install, manage, and maintain solar power systems on the roofs of consumers' offices free of charge. Consumers then purchase the electricity that is generated. PPA stands for Power Purchase Agreement

\*4 FIT: A system where power companies purchase electricity from renewable energy sources at a fixed price for a fixed period of time. FIT stands for Feed in Tariff

FIP: A system where power generation business operators that produce electricity from renewable energy sources and sell it in wholesale markets or through over-the-counter trading are granted a premium equivalent to the difference in the standard price (FIP price) and the market price. FIP stands for Feed in Premium



equipment and water-saving facilities. We also sold edible container products at the EAS café. (Sales currently suspended)

In FY2022, in addition to continuing and expanding the above initiatives, Living & Wellness Business acquired real estate assessor qualifications of CASBEE (Comprehensive Assessment System for Built Environment Efficiency), which is a method for evaluating and rating the environmental performance of buildings. We also changed straws, cups, and cutlery to paper, reduced food mileage\*, and promoted production for recycling preform (PET bottle material).

\* This thinking focuses on the impact on the global environment of CO2 emitted from the transportation of food. The Company is involved in an initiative to offer products purchased from local stores in Yokohama-shi or vegetables hydroponically grown in the stores.



Response to climate change

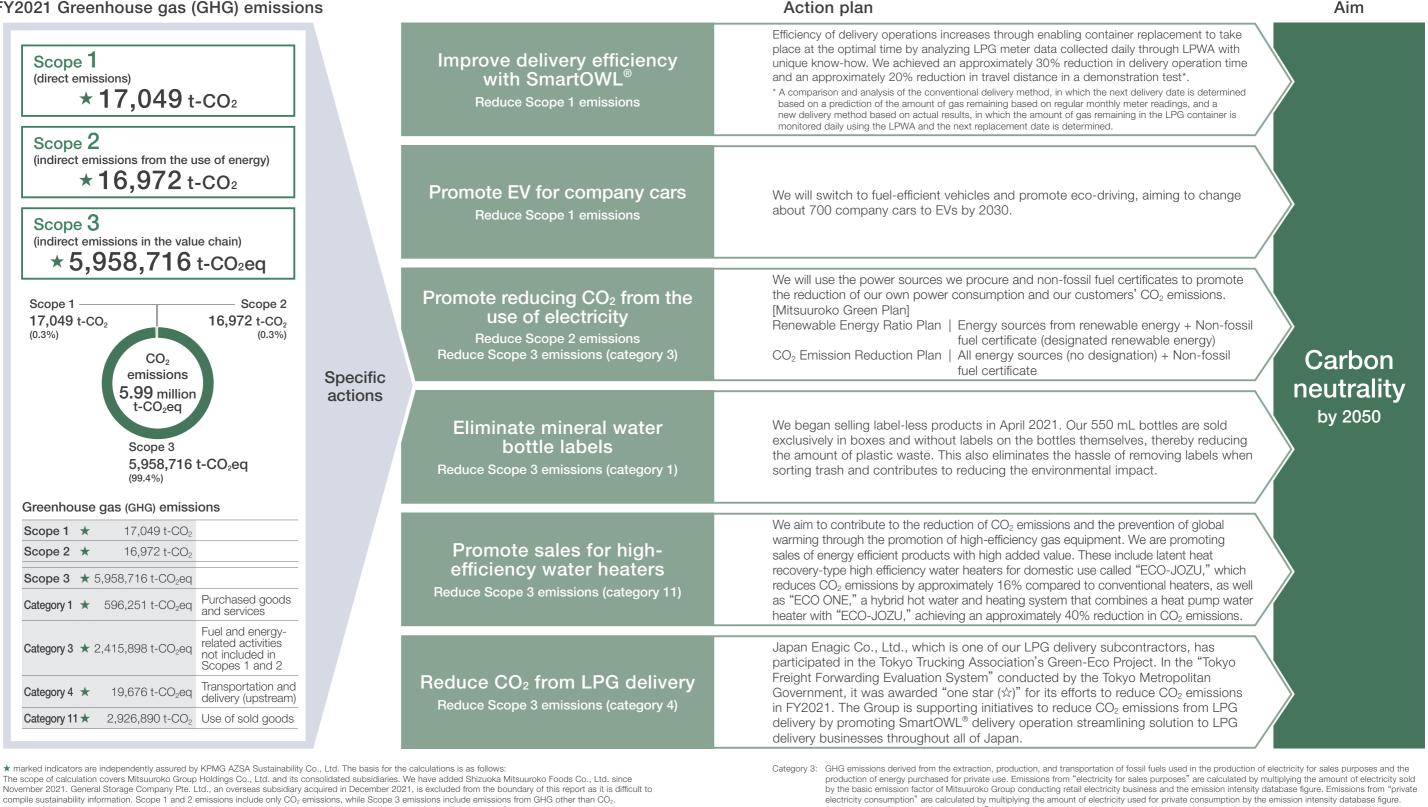
Environment

## Response to climate change

#### CO<sub>2</sub> emissions reduction target

specified in IDEAv2

FY2021 Greenhouse gas (GHG) emissions



compile sustainability information. Scope 1 and 2 emissions include only CO2 emissions, while Scope 3 emissions include emissions from GHG other than CO2. Scope 1: CO2 emission factor of fuel and the unit calorific value are based on the coefficients specified in the Act on Promotion of Global Warming Countermeasures Scope 2: CO<sub>2</sub> emission factor of electricity based on the adjusted emission factors by electric utility business operator.

Scope 3: Each emissions intensity is referenced from the Act on Promotion of Global Warming Countermeasures; the Ministry of the Environment's "Database on Emissions Unit Values for Accounting of Greenhouse Gas Emissions, etc., by Organizations Throughout the Supply Chain"; and the Inventory Database for Environmental Analysis version 2 (IDEAv2) for calculating supply chain greenhouse gas emissions, published by the Sustainable Management Promotion Organization

intensity from the Ministry of the Environment database Category 1: Calculated by multiplying the amount (physical quantity) of petroleum-derived fuel and city gas procured for sales by the emission intensity for each fuel type emission factors.

specified in IDEAv2 for each fuel type.



Emissions from "private fuel consumption" are calculated by multiplying the amount of fuel used for private consumption by the fuel emission intensities

Category 4: Upstream transportation emissions are calculated by multiplying the transportation volume (t-km), which is the product of the cargo weight and the distance transported, by the IDEAv2 emission intensity for each transportation type. For shipping and transportation, fuel consumption is multiplied by the emission

Category 11: Calculated by multiplying the sold volume (physical quantity) of petroleum-derived fuel and city gas by their respective fuel-specific calorific values and CO<sub>2</sub>

## Response to climate change

#### Controlling customer CO<sub>2</sub> emissions

#### Promotion of high-efficiency gas equipment

We seek to contribute to the reduction of  $CO_2$ emissions and the prevention of global warming through the promotion of high-efficiency gas equipment, proposing and selling efficient products with high added value. Aiming to meet our customers' diverse needs and preferences, these products include latent heat recovery-type high efficiency water heaters for domestic use called "ECO-JOZU," which reduce CO<sub>2</sub> emissions by approximately 16% compared to conventional heaters, as well as "ECO ONE," a hybrid hot water and heating system that combines a heat pump water heater with "ECO-JOZU," achieving an approximately 40% reduction in CO<sub>2</sub> emissions.

## **ECOONE**



lvbrid hot water and eating system "ECO ONE"

#### Promotion of residential-use fuel cell "ENE-FARM"

For the promotion of the new energy solutions business, we are working to improve energy efficiency through a local power production and consumption approach centered on the best mix of energy. We are currently focusing on the fact that the main forms of power supply have low energy efficiency in terms of transmission loss and waste heat loss, promoting the rollout of "ENE-FARM." a distributed power generation system installed in each consumption area. "ENE-FARM" is an LPG-based system, and we are mainly concentrating on popularizing it among new general households by partnering with home construction companies. Through these efforts, we will continue to promote the spread of distributed energy systems.



Residential-use fuel cell "ENE-FARM"

#### Expanding sales of solar power generation systems

Solar power is a carbon-free source of energy that does not emit greenhouse gases. Consumers do not need to pay consumption charges and can reduce the amount of electricity they purchase from power companies by using the power generated for their own household. Unused energy can then be sold to power companies. It is also highly economic, as once installed, power can continue to be generated as long as there is sunlight. Since Japan often faces natural disasters such as earthquakes, typhoons, and severe rainstorms, solar represents an effective source of emergency power in the event of power outages. We will also promote the spread of energy creation/storage system through the installation of storage batteries together with solar power generation systems.



## Expanding the energy solutions business

We save energy at a wide range of facilities including plants, commercial facilities, and hospitals through the selection and maintenance of cogeneration systems and the proposal of energy-saving equipment. We also work to realize comprehensive energy management centered on electricity, thermal, measurement, control, power storage, and power generation. In addition to reducing running costs with our energy solutions, we are expanding business that helps the global environment. Committed to the achievement of a sustainable society, we provide solutions for the future.

#### Development of renewable energy sources

Renewable energy is an important form of domestic energy that does not emit greenhouse gases and can be produced within Japan. It harnesses the natural environment and is also a vital power source for the development and maintenance of society. In addition to the power plants we already possess, we are also developing renewable energy sources such as solar, wind, and biomass.

#### Provision of the Mitsuuroko Green Plan

Since the "Paris Agreement" was adopted in December 2015. the awareness of consumers and investors toward climate change has increased rapidly, and corporate efforts toward reducing greenhouse gas emissions are being viewed as important. By providing

	— What is the Mits	uuroko
	The Mitsuuroko Green Plan uses renewable energy supplied by Mitsuuroko Green Energy Co., Ltd., as well as non-fossil fuel certificates. It offers CO <sub>2</sub> emission factors tailored for customers' needs in two main options. * It not only reduces electricity charges, but also enables customers to reduce their CO <sub>2</sub> emission factors. * The plan is available Japan-wide excluding Okinawa and some remote islands.	1 F
	Benefits of the Mitsuuroko Green Plan	
(	Lead improvement of corporate image.	2 0
(	<ul> <li>Customers can report lower emissions in the System for Greenhouse Gas Emissions Calculation, Reporting, and Disclosure based on the Act on Promotion of Global Warming Countermeasures (Global Warming Countermeasures Act).</li> </ul>	A
(	<ul> <li>Customers can report lower emissions in a CDP report, which is noticed by corporate investors.</li> </ul>	
(	<ul> <li>Customers using our extra-high-voltage power service or high-voltage power service can view the balance between</li> </ul>	

- Custo high-v costs, emission factors, and renewable energy introduction
- ratio, and select a plan. Customers using our low voltage power service can choose between the 100% renewable energy plan and the 0.00 emission factor plan.







the "Mitsuuroko Green Plan" to customers who are working to reduce their CO<sub>2</sub> emissions, we will contribute to a low-carbon society and meet the needs of our customers.

## Green Plan... Renewable Energy Ratio Plan nergy sources from renewable energy + Non-fossil fuel certificate av Co., I td Non-fossil fuel certificates (designated CO, Emission Reduction Plan Il energy sources + Non-fossil fuel certificate Custo rav Co.. Ltd Non-fossil fuel certificates

## Response to climate change

#### Key examples

#### Provision of electricity through off-site corporate PPA

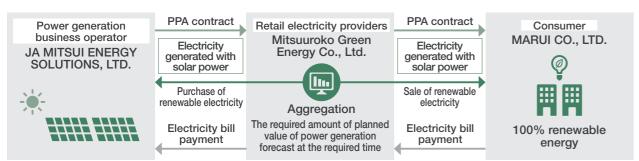
In April 2021, Mitsuuroko Green Energy Co., Ltd. provided the "Mitsuuroko Green Plan," which adheres to the "RE100<sup>\*1</sup>," global initiative on renewable energy, to the facilities of "RE100" member MARUI GROUP CO., LTD.

As a new initiative, in December 2022, it was decided that Mitsuuroko Green Energy Co., Ltd., MARUI CO., LTD., and JA MITSUI ENERGY SOLUTIONS, LTD. will jointly work to establish an off-site corporate PPA<sup>\*2</sup>. In this business, Mitsuuroko Green Energy Co., Ltd.

supplies electricity derived from renewable energy sources generated at five solar power plants newly developed by JA MITSUI ENERGY SOLUTIONS, LTD. in the service area of Tokyo Electric Power Company. together with RE100-compliant electricity, to two facilities of MARUI CO., LTD. in Tokyo. The business has been selected for the "Subsidy for Promotion of Customer-led Introduction of Solar Power Generation (FY2022 budget)," a publicly offered program by the Ministry of Economy, Trade and Industry.

\*1 "RE100" is a global initiative aimed at preventing global warming. It is led by The Climate Group (international NGO working to reduce greenhouse gas emissions) in partnership with the CDP (international NGO promoting disclosures on environmental problems). Member companies pledge and publicly announce that they will use 100% renewable energy for the electricity used in their business activities by 2050 at the latest.

\*2 Corporate PPA is a method in which consumers procure renewable energy power from a power generation business operator for a long period of time and at a fixed price.



#### Provision of the Mitsuuroko Green Plan to construction companies

Mitsuuroko Green Energy Co., Ltd. has partnered with a construction company and started to provide new construction sites with the Mitsuuroko Green Plan, a CO<sub>2</sub> emission reduction plan that contributes to the measures against global warming.

Many construction companies are also working on sustainability initiatives, and in response to requests for electricity to be used at new construction sites, we decided to introduce the Mitsuuroko Green Plan supplied by Mitsuuroko Green Energy Co., Ltd.

#### Initiatives of operating companies

#### Participation in TSE's carbon credit market demonstration project

Since December 2022, Mitsuuroko Vessel Co., Ltd. has participated in the carbon credit market demonstration project, which the Tokyo Stock Exchange has been conducting on a trial basis as a project commissioned by the Ministry of Economy, Trade and Industry.

In order to achieve the goal of carbon neutrality by 2050, the government has presented the "GX (Green Transformation) League Basic Concept," a voluntary framework for setting ambitious  $\rm CO_2$  emissions reduction targets based on national guidelines, trading credits to achieve the targets, and having the government confirm the results. As part of this framework, the government has proposed the establishment of a carbon credit market as a platform for voluntary emissions trading, as well as a mechanism for setting voluntary emissions reduction targets and emissions trading to achieve these targets. This project is to demonstrate the establishment of a market where carbon credits are widely traded in a form where the price is publicly announced.



#### Improving delivery efficiency with SmartOWL®

In the LPG business, we are contributing to the realization of a low-carbon society by eliminating waste and by reviewing the existing workflow. SmartOWL<sup>®</sup> service is a solution that increases the efficiency of LPG operations through the collection and analysis of LPG meter information and the application of know-how gained in demonstration tests. The operational know-how and series of business models that link information collected by LPWA to delivery efficiency improvement have been patented, and we are expanding the service to enable more LPG companies to use it.

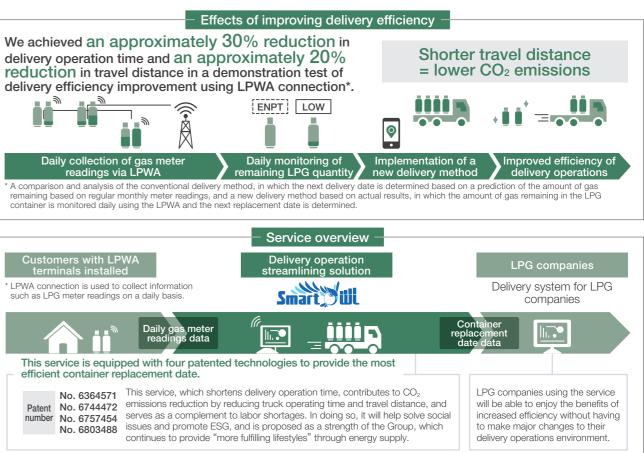


#### Reducing environmental impact by improving delivery efficiency

In order to use LPG, it is essential to deliver LPG containers to the consumers' homes by truck, and by streamlining this delivery operation, the distance traveled by trucks can be shortened, thereby reducing CO<sub>2</sub> emissions.

#### Effectiveness has been proven through experiments

Mitsuuroko Creative Solutions Co., Ltd. conducted an experiment from October 2018 to the end of September 2019 and demonstrated the effects of improving delivery

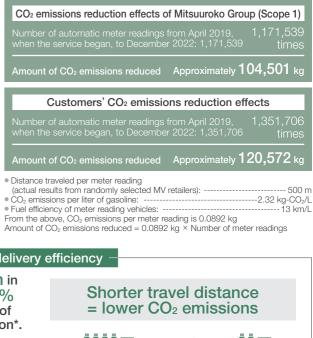


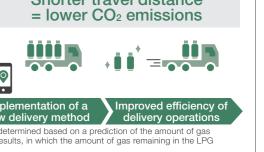


efficiency by utilizing data automatically acquired through LPWA connection.

Through digital transformation (DX), we have developed a proprietary system that incorporates four patented technologies and know-how that reduced the delivery operation time by 30% in the demonstration tests, and the service has been available as "SmartOWL® delivery operation streamlining solution" to LPG companies since October 2021.

#### Reduction in the number of meter readings through automated meter reading and reduction effects of CO<sub>2</sub> emissions





<sup>\*</sup> TSE's carbon credit market demonstration project

## Response to climate change

#### Wind power generation business

In wind power generation, a turbine is turned by the force of wind, and this rotational motion is then transferred to a generator to create electricity. It is a comparatively efficient method of power generation where 40% of wind's energy can be converted to electricity. With its long coast lines, Japan has many locations suitable for harnessing stable wind power (average wind speed of 6 m/second or more), making it a promising country for wind turbines. We are also considering the installation of offshore wind turbines.

			Total output
March 2007		Oshima-mura, Hirado-shi, Nagasaki	32,000 kW
January 2008	Kamisu Wind Power Station	Yanagawa, Kamisu-shi, Ibaraki	10,000 kW



#### Biomass power generation business

Biomass is an organic resource (excluding fossil fuel) produced by organisms from the inorganic compounds of water and  $CO_2$  using solar energy. It is a sustainable and renewable energy source that only requires life and solar energy. Within biomass, it is the category of "woody biomass," which comes from wood such as thinned wood and construction wood waste. Since  $CO_2$  generated by burning woody biomass is absorbed from the atmosphere by trees in the process of photosynthesis that drives their growth, there is virtually no increase in atmospheric  $CO_2$ . This is called "carbon neutral."

#### Mega solar business

Although mega solar plants adopt the same mechanism as residential solar power systems, they are not installed on the roofs of houses. They are installed in large areas of vacant land and have large-scale generation capacity making them suitable for industrial use. Expectations are high for both the Suigo-Itako Solar Power Plant in Ibaraki (power output of approximately 14,500 kW) and the Futtsu Solar Power Plant in Chiba (power output of approximately 40,000 kW), which are participating in the business, as next-generation energy sources.

			Total output
February 2014	Suigo-Itako Solar Power Plant	Maekawa, Itako-shi, Ibaraki	14,500 kW
July 2014	Futtsu Solar Power Plant	Shimokenzaku, Kato, Futtsu-shi, Chiba	40,000 kW



#### Solar power plants with output under two megawatts

The Group is working to expand the use of solar power generation systems and fuel cells to promote the spread of renewable energy.

We also have solar power plants that are of a smaller scale than the mega solar plants described above (less than 2 megawatts). We currently operate these plants in 19 locations, and the total output in FY2021 was 7,152 thousand kWh.



# Commencement of construction preparation for grid energy storage stations that will contribute to spreading renewable energy as the main form of power and the stability of power grid

Mitsuuroko Green Energy Co., Ltd. has begun preparations for the construction of the Kitahiroshima No.1 and No.2 Storage Stations in Kitahiroshima-shi, Hokkaido.

The use of renewable energy power generation facilities for the realization of carbon neutrality by 2050 is expanding. However, there are difficulties in power generation prediction and control due to the fact that facilities such as those for solar and wind power are affected by the seasons and the climate. To solve these challenges, it is essential to secure "adjustment power" to suppress unstable power generation.

At these power storage stations, the storage batteries can be used as "adjustment power," and the charge



Megapack, a large-scale industrial use storage battery manufactured by TESLA Inc. Source: TESLA (https://www.tesla.com/megapack)





We provide electricity produced at the Mitsuuroko Iwakuni Power Plant to the customers of our power and electricity sales business.

or discharge control of the storage batteries can then be used to compensate for the shortfall in the power generation plan of the renewable energy power source, thereby contributing to the stabilization of the power grid\*<sup>1</sup>. In addition, these storage stations can also be used in the control of distributed energy resources and other such applications.

Mitsuuroko Green Energy Co., Ltd. seeks to create a stable and efficient balance of supply and demand for electricity. As an aggregator<sup>\*2</sup>, it will contribute to the further adoption of renewable energy and the stabilization of power systems by entering new markets, such as the supply-demand adjustment market and the capacity market.

			Output
Completion date to be confirmed*3	Kitahiroshima No.1 and No.2 Storage Stations	Kitahiroshima- shi, Hokkaido	3,085.6 kW

\*1 Power grid

A system that integrates power generation, substation, power transmission, and distribution to supply power to consumers' power receiving equipment. \*2 Aggregator

A business operator that effectively manages energy by bundling the electricity demand of consumers and the electricity of distributed power sources (storage batteries and private power generation equipment).

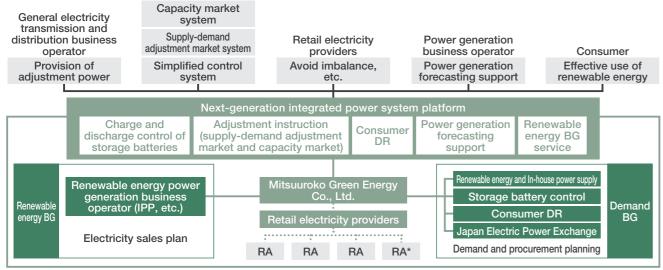
\*3 The delivery date has been delayed due to the situation in Ukraine, and the completion date has not yet been confirmed.

## Response to climate change

#### Initiative for participating in renewable energy aggregation business

To participate in renewable energy aggregation business, Mitsuuroko Green Energy Co., Ltd., has entered into and started operation of a business tie-up with Nippon Koei Co., Ltd. to develop and demonstrate Integrated Power Control Central (IPoCC), a nextgeneration integrated power system that utilizes distributed energy resources such as storage batteries. Based on the business tie-ups, we aim to build "IPoCC" and provide power generation forecasting and renewable energy supply-demand adjustment services for renewable energy power generation facilities, such as those for solar and wind power, which fluctuate substantially. Its development will enable a smoother response to the supply-demand adjustment market which is phased in from FY2021, and the capacity market, which will start in FY2024.

Mitsuuroko Green Energy Co., Ltd. and Nippon Koei Co., Ltd. have labelled IPoCC as "epoch-making." The two companies aim to establish it as next-generation standard in power control systems, and in addition to developing and testing it, they are focusing on external sales and the expansion of aggregation energy business. Through these efforts, they will contribute to the popularization of renewable energy and the realization of a decarbonized society.



\* Resource aggregator: Business operator that enters into direct service contracts with consumers and controls resources.

#### Received a five-star rating from the Energy Conservation Communication Ranking System

Mitsuuroko Green Energy Co., Ltd. received the highest rating of five stars as a retail electricity provider in the 2022 evaluation results of the "Energy Conservation Communication Ranking System" conducted by the Ministry of Economy, Trade and Industry and the Agency for Natural Resources and Energy. The purpose of this system is to evaluate and publicize the level of information and services provided by each provider for general consumers regarding energy efficiency and conservation and the status of their efforts, so that general consumers can use the evaluation results as reference information when selecting an electricity or gas company, and to encourage further energy efficiency and conservation efforts based on the information provided for it. Mitsuuroko Green Energy is actively working to provide useful information on energy efficiency and conservation to customers, share information on environmental issues and initiatives related to decarbonization through webinars and social media, and expand the use of demand response services to encourage power-saving.



#### Improvement and expansion of demand response service functions for the nextgeneration integrated power system IPoCC

Since July 2021, Mitsuuroko Green Energy Co., Ltd. has been providing Demand Response (DR) services to its customers using our extra-high-voltage power service or high-voltage power service. However, the supply-demand situation for electricity has remained difficult due to recent sharp rises in fuel prices, the shutdown of thermal power plants, and the heat waves in the summer. In light of this, in August 2022, we enhanced the DR service functions of our nextgeneration integrated power system, IPoCC, and began new operations in response to requests for powersaving from the government and general electricity transmission and distribution business operators.

- <Added functions>
- Early delivery of DR implementation result reports
- Long-term DR activation

#### Moss cultivation business initiatives

We have begun a new moss cultivation business as an initiative to utilize our idle land. In November 2022, the field was expanded to 2,500 m<sup>2</sup> and 18 long sheets (1 m × 50 m) were installed in addition to the conventional cultivation of seed moss. It is expected to be used for weed control and greening in highway service areas, inside plant facilities, and railroad operator track areas.

#### Other climate change initiatives

#### Activities to protect and nurture the forests around water collection sites

Working together with local communities, we are engaging in activities to protect and nurture the forests around the water sources used by Mitsuuroko Beverage Co., Ltd., a Group company that produces natural water products (mineral water production and sales business). We support activities advocated by Yamanashi Prefecture for the protection and nurture of national forests that are deteriorating. Partnering with Narusawa Village 1st District, we have entered into an agreement for participating in volunteer activities to maintain the Narusawa Village 1st District's own forest. Mitsuuroko Beverage Co., Ltd. is actively engaging in these efforts as part of activities to recharge water sources that provide the water essential for producing its products.

 $^{\ast}$  From FY2020 to FY2022, this activity was not conducted due to the spread of COVID-19.



In addition, we have expanded the provision of DR services to customers using our low-voltage power service since November 2022. By utilizing this service together with our customers, we will contribute to alleviating the supply crunch of electricity and economical energy use through power-saving, peakshifting, and energy efficiency and conservation initiatives, and help to expand the introduction of renewable energy for a decarbonized society.

\* Demand response is a system that allows consumers to change their electricity consumption patterns in response to electricity pricing or incentive payments in order to curb the use of electricity during times of high wholesale market prices or low grid reliability, in order to balance the supply and demand of electricity by decreasing or increasing the consumption of electricity. As renewable energy sources become more prevalent, there is a need for an adjustment mechanism that handles power generation being affected by weather conditions, and DR is an effective means to address this issue.





## Response to climate change

#### Baking bread using domestic wheat

Sweet Style Co., Ltd.'s bakery, "Azabujuban Mont-Thabor," focuses on selling frozen bread that uses domestically produced wheat. Using domestically produced wheat as the raw material shortens the transportation distance and does not use chemicals such as fungicide for importing. It also uses raw materials milled with a stone mill and offer customers products baked at the stores. These products are made with meticulous attention to the environment, health. and superb taste (aroma), and are winning the support of many customers as a new value.



#### Installation of solar panels on the roofs of the company's facilities

General Storage Company Pte. Ltd. (GSC), the Company's overseas subsidiary, has set forth "a green and caring tomorrow with self-storage" as its ESG vision. GSC's self-storage brand, Lock+Store, has signed an 18-year purchase agreement with Union Solar Pte Ltd, a solar power generation business operator, to realize this mission. The solar panels installed on the roof of the Chai Chee facility (completed in January 2023), which is a trunk room operated by the Company, will have a maximum output of approximately 487.3 kWp, which is expected to reduce the use of fossil fuel-based energy by approximately 30% when used on-site at the facility.



#### Use of vacant space for vegetable gardens

Lock+Store has partnered with SG Gardens, a local horticultural company, to utilize vacant space at the Chai Chee facility for vegetable gardens. The harvest from the vegetable garden will be donated to charities that support lowincome families or sold to restaurants.



Edible hibiscus



Edible marigold

## Promotion of resource cycle

#### Basic approach

Mitsuuroko Group promotes the 3Rs (Reduce, Reuse, Recycle) throughout the Group. We are strengthening our commitment to resource recycling in our various business activities.

#### 3R promotion initiatives

#### Save Bread" to reduce food waste

Azabujuban Mont-Thabor believes that, "as lovers of bread and the Earth, we cannot waste the bread we have made with our own hands so easily." This is why any bread that was previously discarded daily due to being out of standard (minor aesthetic imperfections or browning) despite having no quality issue, or any bread that did not sell, are now called "Save Bread" and sold at a reasonable price.

This initiative will help reduce food waste and environmental impact, as well as provide an opportunity to try Azabujuban Mont-Thabor's bread at a discount.

#### Launched vending machine for frozen out-of-standard breads

In April 2022, Mont-Thabor Kugenuma Kaigan Store (Fujisawa-shi, Kanagawa) introduced its first frozen bread vending machine, with the aim of providing the delightful experience of enjoying homemade bread, readily available as a convenient and eco-friendly snack. Frozen bread and frozen dough made of 100% domestically produced wheat are readily available for purchase 24 hours a day. We will also contribute to the reduction of food waste and environmental impact by offering out-of-standard bread.

## Sustainable Real Estate Management" initiatives to reduce furniture waste

MITSUUROKO Co., Ltd. is working with Social Interior market provider, on sustainable real estate management Inc., a furniture subscription service and off-price that reduces furniture waste.

#### Initiatives

#### Procurement of furniture for designing space in real estate business through subscription

By not owning the furniture needed for income-producing properties, and by utilizing the subscriptions service offered by Social Interior Inc. to promote the collection and secondary use of furniture when it is no longer wanted in the future, we aim to make effective use of resources.

#### 2 Reducing the hassle of owning furniture needed by property users, collecting unwanted furniture, and reusing it

We will progressively make the Subsclife furniture subscription service of Social Interior Inc. available to tenants and users of rental apartments, office buildings, and commercial facilities operated by MITSUUROKO Co., Ltd. at discounted prices. This reduces the users' initial setup fees, the hassle of ownership, and the hassle of arranging for disposal when no longer wanted. At the end of the period, Social Interior Inc. will collect the furniture and promote its secondary use in its off-price market, Subsclife Off Price.

**Environment** 









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SOCIAL

## Promotion of resource cycle

#### Bowling pin reuse contest and reuse education in elementary schools

In May 2022, as part of the Rain-Bowling Project\*1, a sustainable activity using discarded bowling pins, Mitsuuroko Sports Co., Ltd. held the Bowling Pin Reuse Contest<sup>\*2</sup> in cooperation with the Kanagawa Shimbun. After careful screening of 161 applications, 19 winners were awarded prizes.

The grand prize winner. Yamoto Elementary School in Yokohama-shi, held a Rain-Bowling class (an original bowling game that allows students to learn how to reuse discarded pins while having fun playing) as part of their 4th grade class on SDGs. (Held in November 2022)

We will continue to promote the project with the aim of contributing to the local communities and the environment.

\*1 A project to provide children in Yokohama-shi with opportunities to

experience the SDGs through play using discarded bowling pins

\*2 A project to invite application for reuse ideas on new ways to reuse bowling pins, of which approximately 500 are discarded by Hamabowl each year. A contest aiming for the realization of a sustainable society



Rain-Bowling Project image characters Pinffanv & Pinbow

Excellent prize (5 winners)



by Ms. Ikeda, Yamoto Elementary School, Yokohama-shi

Bowling Pin Reuse Contest



by Ms. Kosai \* Four other applicants received the award.

#### EAS café promoting elimination of plastic and local production for local consumption toward becoming a sustainable cafe

In FY2022, we eliminated all conventional plastic cups and replaced them with paper cups and paper straws\*. In addition, in purchasing ingredients, vegetables are procured from local stores in Yokohama-shi, and only the necessary amount is harvested through hydroponic cultivation using the plant cellar within the EAS café, thereby reducing food mileage and food waste. We will continue to operate our facilities with an awareness of our contribution to the environment and the local community.

\* In order to maintain service quality and ease of drinking, we have introduced stainless steel tumblers instead of paper cups for some alcoholic beverages in response to customer feedback



#### Flower installation: Smile Flower Bath installation

SPA EAS: Yokohama Tennen Onsen supports the Smile Flower Project, an initiative to save flowers that would otherwise be discarded as out-of-standard products or wasted due to the shrinking market caused by the pandemic. At the entrance, flower baths (hanachozu) are created and displayed according to the season, welcoming quests in a festive manner. In addition, events aimed at raising awareness of the project included a popularity contest for flower art and a stamp collecting game, creating a cycle that links the smiles of employees, flower farmers, and customers through the flower decoration initiative. We will continue to strive to recycle resources and enhance the value of facilities with ideas that capture current trends.

#### Promotion of recycling of used paper and clothes

Lock+Store supports the activities of SG Recycle Pte Ltd\*, a company involved in the recycling business, and is the first self-storage provider in Asia to install two of SG Recycle's robotic waste collection machines (one for used paper and one for used clothes) at its Chai Chee facility.

\* SG Recycle Pte Ltd has installed more than 100 robotic waste collection machines throughout Singapore. Users can obtain point return services in exchange for used paper and used clothes.

# Supply chain

## Green and eco-friendly projects initiatives

Japan Enagic Co., Ltd., in which our Group company Logitri Holdings Co., Ltd. holds a 20% share, has participated in the Tokyo Trucking Association's Green-Eco Project\*. Through the elimination of complicated deliveries, and promotion of continuous eco-driving activities, Japan Enagic Co., Ltd. has reduced the travel distance by 4.6%, reduced fuel consumption by 8.9%, improved fuel efficiency by 4.71%, and reduced CO<sub>2</sub> emissions by 288 tons (CO<sub>2</sub> absorption equivalent to 20.600 cedar trees) in FY2021 compared to the previous year.

In addition, in the "Tokyo Freight Forwarding Evaluation System" conducted by the Tokyo Metropolitan Government, it was awarded "one star (☆)" for its efforts to reduce CO<sub>2</sub> emissions in FY2021. We are aiming to achieve "environmental CSR (management improvement from the environment)" with







a focus on social contribution and social responsibility by raising the environmental awareness of each and every employee, including management, supervisors, and drivers.



- \* A project launched by the Tokyo Trucking Association that incorporates unique CO<sub>2</sub> reduction initiatives in order to contribute to the prevention of global
- The project aims to build a database from the fuel consumption data collected for each vehicle and engage in initiatives such as the promotion and support of continuous eco-driving activity, the reduction of CO<sub>2</sub> emissions, the reduction of costs through the improvement of fuel efficiency, and accident prevention.

Effects of Japan Enagic Co., Ltd.'s activities http://www.tta-gep.jp/search/?p=5333